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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/778,537	02/07/2001	John G. Noetzel	DP-302911 (DEP-0152)	5043
22851	7590	10/21/2005	EXAMINER	
DELPHI TECHNOLOGIES, INC.			LEWIS, BEN	
M/C 480-410-202			ART UNIT	
PO BOX 5052			PAPER NUMBER	
TROY, MI 48007			1745	

DATE MAILED: 10/21/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/778,537

Applicant(s)

NOETZEL ET AL.

Examiner

Ben Lewis

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8, 10, 11, 13-15, 17-21, 23-28 and 31-42 is/are pending in the application.
- 4a) Of the above claim(s) 43-56 is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-8, 10, 11, 13-15, 17-21, 23-28 and 31-42 is/are rejected.
- 7) ☒ Claim(s) 9, 12, 16 and 22 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07 February 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 02/07/01.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: ____.

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Detailed Action

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on September 19th, 2005 has been entered. Claims 1 and 23 have been amended.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-8, 10-11, 13-15, 17-21, 23-28 and 31-42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Okada et al (U.S. Patent No. 6,266,576) in view of Perry's Chemical Engineer's Handbook (Perry's).

Okada et al. disclose a method for controlling reformat delivered to fuel cell. The system includes an electric generating managing means (7), which is a system controller. The electric generating managing means detects the pressure in reservoir tank (12) by a pressure sensor (see column 9, line 36) and thus receives a "reformat pressure signal". The electric generating managing means controls or actuates the variable valve (10). (See column 10, lines 39-42.) As shown in Fig. 1, the variable valve is actuated in response to reformat pressure and target (desired) reformat pressure (26) (See column 9, lines 27-52). Okada et al further teach that as shown in FIG. 13, the fuel cell unit 50 comprises the fuel cell 5 for generating electric energy by way of a chemical reaction between hydrogen and oxygen in air, a first shutoff valve 62 which can be opened and closed by a control signal from the fuel cell controller 56 (See Fig 13) (Col 21 lines 48-67). The first shut off valve 62 is disposed in the reformat stream of Okada et al.

The disclosure of Okada does not explicitly disclose the controller receiving a "controllable valve position signal." As illustrated in Perry's, such a positioner includes a stem-position feedback network, so a valve position signal is provided to the electric generating managing means. (See Perry's, page 8-69.). Therefore it would have been obvious to one of ordinary skill in the art to incorporate the stem-position feedback network of Perry's in the system of Okada et al because Perry's teach that the valve position, when combined with an appropriate actuator, forms a complete closed-loop valve-position control system. This system makes the valve stem conform to the input signal coming from the process controller in spite of force loads the actuator may

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encounter while moving the control valve. (See Perry's, Page 8-69) Therefore, a conventional valve positioner would enable the variable valve disclosed by Okada to send a controllable valve position signal to, and be controlled by the electric generating managing means.

Allowable Subject Matter

3. Claims 9,12,16 and 22 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Claims 9,12,16 and 22 are allowable because the closest prior arts of record Okada and Perry's Handbook do not disclose or suggest controllable valve command is reduced if said controllable valve position error signal is greater than a first position error threshold and increased if said controllable valve position error signal is less than a second position error threshold.

Response to Arguments

6. Applicant's arguments filed on September 19th, 2005 have been fully considered but they are not persuasive.

Applicant's principle arguments are

(a) Neither the primary nor the secondary references disclose or suggest controlling a control valve disposed in the reformate based on the reformate pressure,

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In response to Applicant's arguments, please consider the following comments.

(a) Okada et al further teach that as shown in FIG. 13, the fuel cell unit **50** comprises the fuel cell **5** for generating electric energy by way of a chemical reaction between hydrogen and oxygen in air, a first shutoff valve **62** which can be opened and closed by a control signal from the fuel cell controller **56** (See Fig 13) (Col 21 lines 48-67). The first shut off valve **62** is disposed in the reformat stream of Okada et al.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ben Lewis whose telephone number is 571-272-6481. The examiner can normally be reached on 8:30am - 5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Ryan can be reached on 571-272-1292. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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Ben Lewis



Patent Examiner
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DAH-WEI YUAN
PRIMARY EXAMINER